

A PRESENTATION OF THE SCHEMATIC DESIGN FOR THE HILTON COLISEUM IMPROVEMENTS—1999 PROJECT WILL BE MADE AT THE MARCH BOARD MEETING

ISU B-1

MEMORANDUM

To: Board of Regents

From: Board Office

Subject: Register of Iowa State University Capital Improvement Business Transactions for Period of February 11, 2000 through March 16, 2000

Date: March 6, 2000

Recommended Action:

Approve the Register of Capital Improvement Business Transactions for Iowa State University.

Executive Summary:

Iowa State University requests approval of the program statement, schematic design, and project description and budget (\$3,500,000) for the **Hilton Coliseum Improvements—1999** project which will construct additions to expand the restroom areas of the facility, and address exiting and life safety deficiencies.

Regent Procedural Guide §9.07 provides, in part, as follows: “Program statements will be submitted for Board review for all new buildings, major additions, or remodeling projects with an estimated project cost of \$1 million or more. The Board will be provided with an executive summary of the program statement for approval by the Board prior to the initiation of project design.” Accordingly, development of the schematic design typically does not proceed until the program statement has been approved. However, the program for the Hilton Coliseum project consists only of new and renovated restrooms, and the University indicated that it was necessary to prepare schematic design drawings in the development of the building program for this particular project. The University requests that the Board waive the requirements of Procedural Guide §9.07 and approve the schematic design for the facility at this time.

Representatives of the University and the project architects, Herbert Lewis Kruse Blunck, will attend the March meeting to present the schematic design and answer questions. A booklet outlining the schematic design is included with the Board's docket materials.

The University requests approval of a revised project budget for the **Hawthorn Court Development** project (\$54,834,029) which represents the combined project budgets for Phases 1 and 2 which were previously approved by the Board.

The University requests approval of project descriptions and budgets for the following projects:

Engineering Teaching and Research Complex—Virtual Reality Environment project (\$5,200,000) which will develop a six-sided, full immersion virtual reality system in Howe Hall for the projection of 360 degree, three-dimensional computer-generated images; and

Fire Safety Improvements—FY 2000 project (\$500,000) to provide various fire safety improvements to address deficiencies cited by the State Fire Marshal and the University's Department of Environmental Health and Safety.

The University requests approval of architect/engineer agreements with Brooks Borg and Skiles for the following projects in the listed amounts:

Carver Co-Laboratory project (\$150,000) which will serve as the core unit of the Plant Sciences Institute, establishment of which was approved by the Board in September 1999;

Bessey Hall—Fourth Floor Remodeling project (\$100,000) which will develop space for use by the Plant Sciences Institute; and

Bessey Hall—Growth Chambers project (\$16,000) which will develop space for use by the Departments of Plant Pathology, Botany and Forestry; and the Plant Sciences Institute.

Background and Analysis:

Hilton Coliseum Improvements—1999

<u>Project Summary</u>			
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		July 1999	Approved
Architectural Agreement (Herbert Lewis Kruse Blunck)	\$ 78,200	Nov. 1999	Approved
Program Statement		March 2000	Requested
Schematic Design		March 2000	Requested
Project Description and Total Budget	3,500,000	March 2000	Requested

The improvements to Hilton Coliseum will be undertaken in response to changing demographics and life safety codes, and the increasing demand for guest amenities. In particular, the project will provide additional women's restrooms to accommodate the higher ratio of females to males currently attending events at Hilton Coliseum than attended events when the facility opened in 1971.

Existing Restroom Facilities

The existing restroom facilities do not meet current code requirements for the number of female toilet fixtures. The existing female restroom areas include a total of 40 toilet fixtures which is well below the required number of 68 fixtures based upon the maximum occupancy of Hilton Coliseum (15,000). This disparity results in long waiting times during peak usage. The number of sinks in the female restrooms and all of the male restroom fixtures are in compliance with Code requirements.

Currently, all restroom configurations are not the same. The two restroom areas located in the southwest and southeast corners each provide separate facilities for men and women. The northwest corner restroom currently only serves men, and the northeast corner restroom currently only serves women.

Proposed Restroom Facilities

The project will increase the total number of women's toilet fixtures from 40 to 104 (an increase of 160 percent). The total number of fixtures will exceed code requirements by 36. The project will also increase the number of lavatories in the female restrooms and all fixtures in the male restrooms, even though these components currently meet or exceed building code requirements.

In addition to 104 women's toilet facilities, the proposed modifications will result in a total of 51 female lavatories (an increase of 32), 17 male toilet fixtures (an increase of 2), 64 urinals (an increase of 34), and 35 male lavatories (an increase of 16), located in four restroom areas. Of the total toilet fixtures, 16 in the female restrooms and 8 in the male restrooms will be fully accessible.

Project Design

The goal of the project design was to have a minimal impact on the architecture of the building. An additional objective of the project included developing the restroom areas into an easily understandable system, since the configuration and location of the existing restroom areas are confusing for users. Other goals included limiting construction interruptions for facility events, and consolidating plumbing locations. In addition, the project was designed to maintain the existing glass concourse area to preserve the views of the Iowa State Center and allow continued use of the area for tradeshow booths and vending kiosks.

The proposed project will meet these objectives with the construction of additions to each of the four existing restroom areas which are located in the four corners of the facility. Male and female restroom facilities, with identical configurations, will be provided at each of the four locations. Page A1 of the design booklet provides a diagram of Hilton Coliseum with the existing and proposed restroom areas (the additions are highlighted in yellow); a closer view of each restroom area is provided on page A6.

The four building additions totaling 10,040 square feet, which will be constructed along the outside perimeter walls of the existing restroom areas, will be developed into the female restroom facilities. All of the existing female restroom facilities will be converted to male restroom facilities. This will require the complete conversion of the female restroom located in the northeast corner, and

partial conversion of the south male/female restroom areas. (The existing male restroom in the northwest corner will not be renovated.) The renovation work will include replacement of the majority of the existing toilet fixtures with urinals, and removal of the existing masonry walls separating the male and female areas of the south restrooms to allow expansion of the male restrooms.

With completion of the project, the four restroom areas in Hilton Coliseum will provide a total of 15,440 square feet of space (3,860 square feet each); this represents an increase of close to three times the amount of existing restroom space. The female restroom areas will total 10,040 square feet; the male restroom areas will total 5,400 square feet.

The University has indicated that construction of the restroom additions will be completed prior to undertaking the renovation of the existing restroom facilities. This will allow the new female restroom areas to be available for use prior to commencement of the renovation work.

Life Safety Improvements

The proposed life safety improvements will include the installation of additional doors and widening of the exterior stairs at the north entrance, and the replacement of doors at the west entrance. In addition, the project will install a sprinkler system for the glass enclosure of the west stairway to comply with fire codes. This will also allow use of the stairway enclosure as an Area of Refuge, which is a code-required waiting area for use by persons with physical disabilities in an emergency. The project will also construct two exit corridors with the two south restroom additions to improve exiting from the mezzanine level of the facility.

The proposed project schedule includes completing the design phase by August, 2000, awarding the construction contract in October, 2000, and commencing construction in November of 2000. The anticipated construction time for the project is 12 to 16 months; however, this schedule may need to be extended as the project will require coordination with the various scheduled events at Hilton Coliseum.

The project budget includes funding from the Federal Emergency Management Agency (FEMA) in the amount of \$500,000. The University has indicated that the FEMA funds represent reimbursement of Hilton Coliseum bond surplus funds which were used for clean-up of the facility during the flood of 1993.

Project Budget

Construction Costs	\$ 2,835,000
Professional Fees	531,500
Project Contingency	<u>133,500</u>

TOTAL	<u>\$ 3,500,000</u>
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Source of Funds:

Hilton Coliseum Bond Surplus Funds	\$ 3,000,000
Federal Emergency Management Agency (FEMA)	<u>500,000</u>

TOTAL	<u>\$ 3,500,000</u>
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Hawthorn Court Development

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
<u>Phases 1 and 2</u>			
Permission to Proceed (Phase 1)		June 1998	Approved
Architectural/Engineering Agreement—			
Schematic Design (Rietz Consultants)	\$ 580,040	Sept. 1998	Approved
Permission to Proceed (Phase 2)		Oct. 1998	Approved
Program Statement		Oct. 1998	Approved
Schematic Design		Dec. 1998	Approved
<u>Phase 1</u>			
Project Description and Total Budget	25,913,000	Sept. 1998	Approved
Revised Total Project Budget	26,733,700	Dec. 1998	Approved
Revised Total Project Budget	30,123,000	Feb. 1999	Approved
Architectural/Engineering Agreement—			
Design Development (Rietz Consultants)	1,454,689	Dec. 1998	Approved
<u>Phase 2</u>			
Project Description and Total Budget	25,430,500	Dec. 1998	Approved
Revised Total Project Budget	24,730,500	Feb. 1999	Approved
Architectural/Engineering Agreement—			
Design Development (Rietz Consultants)	1,027,433	Oct. 1999	Approved
Revised Project Budget (Phases 1 and 2 Combined)	54,834,029	March 2000	Requested

The Hawthorn Court Development project will construct 23 apartment units with up to 2,000 beds and a multi-purpose community center on the north side of campus. The project was broken into two phases: The Phase 1 project (\$30,123,000) was approved to fund construction of the first series of approximately 1,000 beds and the community center. The Phase 2 project (\$24,730,500) was approved to fund construction of the remaining apartment units.

The Phase 1 project, which includes construction of the first 1,008 beds, is scheduled to be completed by December 2000. The University anticipates completion of the first 720 beds in July 2000 for occupancy in the fall 2000 semester, and completion of the remaining 288 beds in December 2000 for occupancy in the spring 2001 semester. The Phase 2 project, which will construct 984 beds, is scheduled to be bid in March 2000. The University anticipates completion of 600 beds by July 2001 for occupancy in the fall 2001

semester, and completion of the final 384 beds in December 2001 for occupancy in the spring of 2002. The University has indicated that the completion of any of the series of beds may occur ahead of schedule due to favorable weather conditions.

The University requests approval of a revised project budget totaling \$54,834,029. This represents the combined budgets for Phases 1 and 2 as approved by the Board in February 1999, less \$19,471 to reflect the actual bond proceeds for the project. (The final bond sale for the project occurred at the January 2000 Board meeting.)

The University has indicated that one consolidated budget will better accommodate the overall construction project. The project budgets for the two phases had originally reflected specific work plans, construction costs and financing for each phase. However, a number of changes occurred to the original sequence of the work as the project progressed. Therefore, the University believes it is now more appropriate to administer the construction project with one consolidated budget.

	<u>Project Budget</u>		
	Revised Phase 1 Project Budget (Approved 2/99)	Revised Phase 2 Project Budget (Approved 2/99)	Revised Budget (Phases 1 & 2) March 2000
Construction	\$ 24,592,101	\$ 23,605,069	\$ 48,177,699 *
Professional Fees	2,301,179	1,125,431	3,426,610
Movable Equipment	1,300,000	0	1,300,000
Contingency	<u>1,929,720</u>	<u>0</u>	<u>1,929,720</u>
TOTAL	<u>\$ 30,123,000</u>	<u>\$ 24,730,500</u>	<u>\$ 54,834,029</u> *
<u>Source of Funds:</u>			
Dormitory Revenue Bonds	\$ 28,483,000	\$ 24,730,500	\$ 53,194,029 *
Income from Utility Enterprise	1,400,000	0	1,400,000
Dormitory Surplus Funds	<u>240,000</u>	<u>0</u>	<u>240,000</u>
TOTAL	<u>\$ 30,123,000</u>	<u>\$ 24,730,500</u>	<u>\$ 54,834,029</u> *

* Reduced by \$19,471 to reflect actual proceeds from bond sales.

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
<u>Engineering Teaching and Research Complex</u>			
Permission to Proceed		May 1993	Approved
Planning Funds	\$ 2,190,700	July 1996	Approved
Phase 1 Revised Project Budget	33,763,869	July 1996	Approved
Phase 2 Revised Project Budget	25,066,393	July 1996	Approved
Total Revised Project Budget	61,020,962	Sept. 1997	Approved
<u>Virtual Reality Environment (C6 Facility)</u>			
Architectural Agreement (Brooks Borg and Skiles)	289,000	Sept. 1999	Approved
Project Description and Total Budget	5,200,000	March 2000	Requested

This project will develop the C6 virtual reality environment to be located in the southwest portion of the atrium of Howe Hall of the Engineering Teaching and Research Complex. This environment, which will serve as the major experimental facility for the Virtual Reality Application Center, will allow researchers to interact with three-dimensional simulations of machines, devices, or geometries. Use of the Center will reduce or eliminate expensive and time-consuming physical prototyping.

The University has indicated that the state-of-the-art technology of the virtual reality environment made it impossible to predict the specific form of the environment, as well as the associated costs and project schedule, prior to preparation of the project design. These elements were finalized during the design phase and the C6 environment is currently under construction. The schedule was developed to allow the environment to be featured by the College of Engineering in the upcoming Immersive Projection Technology Conference to be held at the University in June 2000.

Now that the various elements and associated costs of the virtual reality environment have been defined, the University wishes to separate these costs from the overall budget for the Engineering Teaching and Research Complex. According to the University, having a single specific project budget for the virtual reality environment will facilitate the tracking of the various fund sources for the project.

Project Budget

Construction Costs	\$ 2,184,300
Professional Fees	1,223,000

Movable Equipment	1,500,000
Project Contingency	<u>292,700</u>
TOTAL	<u>\$ 5,200,000</u>
Source of Funds:	
ISU Foundation	\$ 3,835,074
General University Funds	740,000
National Science Foundation	530,419
Virtual Reality Applications Center	<u>94,507</u>
TOTAL	<u>\$ 5,200,000</u>

Fire Safety Improvements—FY 2000

Source of Funds: Building Repair Funds

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 500,000	March 2000	Requested

This project will include the installation of smoke detection, fire alarm, and sprinkler systems, fire doors and door hardware, and fire-rated materials in various campus buildings. The project will also address egress issues. The overall project will consist of many individual components, each with a budget of less than \$250,000.

Project Budget

Construction Costs	\$ 379,800
Professional Fees	74,000
Project Contingency	<u>46,200</u>
TOTAL	<u>\$ 500,000</u>

Carver Co-Laboratory

Source of Funds: ISU Foundation, General University Funds, Restricted Funds,
and Agriculture Experiment Station

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Dec. 1999	Approved
Project Description and Total Budget	\$ 7,000,000	Dec. 1999	Approved
Architectural/Engineering Agreement— Schematic Design & Site Planning (Brooks Borg and Skiles)	150,000	March 2000	Requested

This project will construct a facility of approximately 29,000 gross square feet to function as the center of research activities for the Plant Sciences Institute. The specific siting of the facility will be determined during project planning.

The University received expressions of interest from six firms to provide design services for the project. The University convened its Architectural Selection Committee, as required by Board procedures for projects over \$1 million, and selected three firms for interviews and further evaluation. The Committee has recommended the selection of Brooks Borg and Skiles to provide design services for the project. The University requests approval to enter into an agreement with Brooks Borg and Skiles to provide all standard architectural and engineering services from pre-design through the schematic design phase, and limited site planning services. The agreement provides for a fee of \$150,000, including reimbursables.

Bessey Hall—Fourth Floor Remodeling

Source of Funds: General University Funds

<u>Project Summary</u>			
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 950,000	Dec. 1999	Approved
Architectural Agreement (Brooks Borg and Skiles)	100,000	March 2000	Requested

This project will remodel approximately 5,000 net square feet of space in Bessey Hall to accommodate four faculty members for the Center for Plant Responses to Environmental Stresses, which is one of six centers of the Plant Sciences Institute.

The University requests approval to enter into an agreement with Brooks Borg and Skiles to provide all standard architectural and engineering services from pre-design through the construction phase. The agreement provides for a fee of \$100,000, including reimbursables.

Bessey Hall—Growth Chambers

Source of Funds: General University Funds

<u>Project Summary</u>			
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 300,000	Dec. 1999	Approved
Architectural Agreement (Brooks Borg and Skiles)	16,000	March 2000	Requested

This project will remodel approximately 1,200 square feet of space in the basement of Bessey Hall to develop reach-in and walk-in growth chambers.

The University requests approval to enter into an agreement with Brooks Borg and Skiles to provide all standard architectural and engineering services from pre-design through the construction phase. The agreement provides for a fee of \$16,000, including reimbursables.

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Included in the University's capital register for Board ratification are four project budgets under \$250,000, amendments to architect/engineer agreements which were approved by the University (in accordance with Board procedures), construction contracts awarded by the Executive Director, the acceptance of completed construction contracts, and two final reports. These items are listed in the register prepared by the University and are included in the Regent Exhibit Book.

_____	Approved: _____
Sheila Lodge	Frank J. Stork